



PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

MICHAEL SCOTT

Director

Solid Waste Section

May 26, 2016

Mr. Bobby Darden
Executive Director
Costal Regional Solid Waste Management Authority (CRSWMA)
Post Office Box 128
Cove City, North Carolina 28523

Re: Comments on the Revised Permit Amendment Application for Continued Operations
Tuscarora Long-Term Regional Landfill- IRL, Phases 1 through 3
Craven County, North Carolina
Permit No. 2509-MSWLF-1999, Document Identification Number (DIN) 26135

Dear Mr. Darden:

On April 22, 2016 the Division Waste Management (DWM), Solid Waste Section (SWS) received the hard copy of the written responses to the DWM comments dated January 27, 2016 (DIN 25342) which were incorporated into the portions of the revised permit amendment applications (Revised Permit Application) including:

- *Facility Plan, Volume 1, Section III, CRSWMA Tuscarora Landfill Permit to Operate Renewal*. Dated November 2009 and revised April 2016, including the Plan narratives and Tables 1 & 2.
- *Operations Plan, Volume 2, Section VI, CRSWMA Tuscarora Landfill Permit to Operate Renewal*. Dated November 2009 and revised April 2016, including the Plan narratives, Appendix VI-4 – Type 1 Yard Waste Composting – Operations Manual, and one drawing – Drawing No. OP-01
- *Closure & Post Closure Plan, Volume 2, Section VII, CRSWMA Tuscarora Landfill Phase 3 Expansion*. Dated November 2009 and revised April 2016, including the Plan narratives, Appendix VII-2 Closure Cost Estimates, and Appendix VII-6 Post-Closure Cost Estimates.

The above-referenced documents that are prepared by Joyce Engineering, Inc. in Greensboro, NC were combined into a single document and uploaded to the DWM document tracking system with a DIN 25978.

After completing a review on the Revised Permit Application, the SWS has several comments on Closure and Post-Closure Plans and associated cost estimates which are stated below. Your timely responses to the comments will expedite the completion of the reviewing processes.

Closure & Post-Closure Plan

1. (Appendix VII-2, Closure Cost Estimates) The revised Closure Plan describes that the largest area to be closed is 29.6 acres; therefore, the cost unit price and/or quantity should be increased in the cost estimates accordingly in comparison with those stated in the previous submittal.
 - i. Cost Items including Drainage Pipe, Mobilization/demobilization, Survey, Closure Certification & Erosion and Sediment Control. Please explain why the closure area increasing from 19.7 acres to 29.6 acres but the drainage pipe lengths are not increased and the above-mentioned lump sum costs are not increased accordingly in the revised cost estimates. Please revise the quantity and provide the revised cost estimates.
 - ii. Except for the costs of the synthetic membrane, why the unit costs for other cost items are decreasing from those in the 2015 submittal. The total costs per acre of closure area (\$161,469/acre) is less than that (\$170,439/acre) in 2009 cost estimate. Please provide the latest cost data from reliable sources, such as RSMeans reference books, government agencies, and/or the similar project completed in 2015 to demonstrate that the deduction of the unit costs for the cost items are reasonable and acceptable. Please be advised that the costs of the landfill closure construction must be estimated based on the contracting the third party to complete the project. If the back-up reference(s) is not available, please revise the cost estimates without reducing unit costs submitted in 2015.
2. (Section 2.0 Post Closure Activities) Please address the following concerns of the post-closure plan:
 - i. (Section 2.3 Post-Closure Maintenance) Please add the maintenance & repair of the monitoring network – groundwater wells and landfill gas wells, probes & vents to the post-closure care tasks.
 - ii. (Section 2.5.5 Leachate Management) Please address the following concerns:
 - a. According to the agreement appended to the Revised Permit Application, leachate will be directly discharged into the constructed sewer system in following years. The description of leachate management in the last sentence of the first paragraph does not likely occur in the post-closure period.
 - b. Pursuant to Rule 15A NCAC 13B. 1627(d)(1)(B), this Section must describe the maintenance of the leachate collection & storage system, producing leachate generation records, leachate monitoring requirements, leachate disposal methods, contingency plan for the extreme conditions, and record keeping requirements.
3. (Appendix VII-6, Post- Closure Cost Estimates) Please explain why some unit costs for cost items (except the leachate removal costs) are decreasing from those in the previously submittals in 2009 & 2015. Please provide the latest cost data from reliable sources, such as RSMeans reference books, government agencies, and/or the similar project completed in 2015 to demonstrate that the deduction of the unit costs for the cost items are reasonable and acceptable. Please be advised that the costs of the landfill post-closure cares must be estimated based on the contracting the third party to complete the tasks. If the back-up

reference(s) is not available, please revise the cost estimates without reducing unit costs submitted in 2015.

The CRSWMA should submit the SWS the written response to each above-mentioned comment which would be incorporated into the revised Permit Amendment Application. One electronic copy (pdf format) of the entire revised Permit Application and the hard copy of the revised portions of the Permit Application should be submitted to the SWS for a review. The SWS is highly appreciating your cooperation on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Chao', written in a cursive style.

Ming-Tai Chao, P.E.
Environmental Engineer
Division of Waste Management, NCDEQ

cc:

Amy Davis, P.E., Joyce
Christine Ritter, DWM
Drew Hammonds, DWM

Ed Mussler, Permitting Branch Supervisor
Ray Williams, DWM
Central Files